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Germination of teleutospores.—In order to throw some light on the parallelism between the time period during which teleutospores are capable of germination and that during which their host plants can be infected, DIETEL[20] has, in a general way, studied some of the factors influencing the germination of teleutospores of *Melampsora*. Early in March the teleutospores of *Melampsora Larici-Caprearum* Kleb. germinate in about three days when brought into a higher temperature. The time required for germination decreases as the season progresses. Whether the shortening of the period required for germination was due to temperature changes or to a kind of after-ripening of the spores independent of the temperature was not determined. Temporary drying hastened germination. Temporary freezing did not retard the process. Strong light delayed germination. Germination takes place at temperatures as low as 6° C., and only in the neighborhood of this low point was any influence of temperature observed. Experiments with *M. Tremulae* seemed to indicate that germination in this form is less influenced by drying than in *M. Larici-Caprearum*. Germination takes place at temperatures of 6°–10° C., but proceeds more rapidly at 15°–20° C.—H. HASSELBRING.

Seedling structure in Leguminosae.—COMPTON[21] has made a notable contribution to our knowledge of seedling structure. He has examined 201 species of Leguminosae, ranging through all the regions of that vast family. The three parts of the paper present the detailed descriptions, the summarized information, and the general discussion. Under the last head the following topics are considered: the nature of the hypocotyl, hypogeal and epigeal germination, the epicotyl in the Vicieae, the level of the transition, the level of transition and the mature habit, the level of transition and phylogeny, the type of symmetry, plumular traces in hypocotyl and root, tetrarchy, reduction of the number of protoxylems, triarchy, other types of symmetry, the relationships of the types of symmetry, the size of the seedling, the primitive habit. It is obvious that in so extensive a work no outline of the results can be given, and we commend those interested to the 14 conclusions stated by the author. The closing sentence is significant: "To a limited extent, therefore, characters of seedling structure may be of diagnostic value; but it is exceedingly risky to apply them to solve the broader problems of phylogeny."—J. M. C.

Effect of tarred roads on vegetation.—With the extension of the use of gas-tar, petroleum, and bituminous substances for surfacing roads, especially in public parks, the question of injury to plants by these substances becomes one of importance. While many experiments have shown that plants are easily damaged by the fumes of tar and similar substances, such experiments

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[20] DIETEL, P., Versuche über die Keimungsbedingungen der Teleutosporen einiger Uredineen. Centralbl. Bakt. II. **31**:95–106. 1911.

[21] COMPTON, R. H., An investigation of the seedling structure in the Leguminosae. Linn. Soc. Jour. Bot. **41**:1–122. *pls. 1–9*. 1912.